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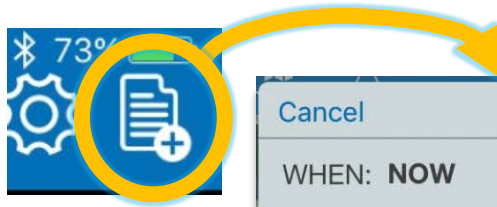
GA pilot

CFI/CFII

Cirrus Pilot Proficiency Program (CPPP) Instructor



Electronic PIREP Submission



- Launched July 2014
- Free to all pilots
- iOS iPad & iPhone support
- Over 5,000 users
- LMFS web services



NTSB PIREP PANEL JUNE 2016

A screenshot of the 'ADD REPORT' app interface. At the top, there's a 'Cancel' button and the title 'ADD REPORT'. Below this, the 'WHEN' section has a 'NOW' button and a slider for '30 MINS AGO' to 'NOW', with the text 'Minutes ago the report occurred'. The 'LOCATION' section has 'GPS' and 'MANUAL' buttons. The 'CALLSIGN' field contains 'N1303H'. The 'ALTITUDE (FEET MSL)' field contains '8000'. The 'TYPE' field contains 'SR22'. The 'REMARKS' section has a large text input area. The 'SHARING' section has 'Share on social network.' text, Twitter and Facebook icons, a camera icon, and an 'ADD PHOTO' button. The 'RIDE' section is set to 'LIGHT TURBULENCE' and shows a grid of turbulence icons. Below the grid are 'Turbulence' and 'Chop' buttons, and an 'LLWS' button. The 'PRECIPITATION' section is set to 'RAINY' and shows a grid of precipitation icons. Below the grid are 'Wind Deg: 270', 'Knots: 32', and a 'Vis:' slider set to 'N/A'. The 'ICING' section is set to 'NEGATIVE ICING' and shows a grid of icing icons. Below the grid are 'Outside Air Temperature: 1 C' and 'Vis: N/A'. The 'TURBULENCE' section has 'BASES: 4500' and 'TOPS: 18000' fields, and 'Occasional' and 'Continuous' buttons. The 'CLOUDS' section has 'BASES: 1800' and 'TOPS: 7000' fields, and 'Clear', 'Few', 'Sct', 'Bkn', and 'Ovc' buttons. The 'ICING' section has 'BASES: 1800' and 'TOPS: 3000' fields, and 'Clear', 'Rime', and 'Mixed' buttons. At the bottom, there is a large blue 'SUBMIT REPORT' button.

Electronic PIREP Submission

Benefits...

- Simplicity & Speed
- Accuracy, removes data entry & communication errors
- Historical PIREP submission (≤ 30 minutes) to accommodate safe time for PIC to use device such as after aircraft shutdown.
- Users receive a PUSH feedback-loop of acceptance into NAS.
- Aviation Weather Center (AWC) now accepts web-based PIREP submission via aviationweather.gov

The screenshot shows a mobile application interface for submitting a PIREP. At the top, there's a title bar 'Selected Point' with a close button. Below it are three tabs: 'WEATHER' (selected), 'AIRSPACE', and 'NAV/AIRPORTS'. Under the 'WEATHER' tab, there are three buttons: 'SKEWT', 'METEOGRAM', and 'GFS MOS'. Below these are three input fields: 'Start Date' with the value '6/2 10AM', 'Hours' with the value '4', and 'Forecast Model' with the value 'Op40'. At the bottom, there is a large blue button with a document icon and the text 'NEW REPORT', which is highlighted with a yellow rectangle. The bottom of the screen shows a status bar with a 'D➔' icon on the left, the alphanumeric code '15SUD31766259' and coordinates '39.3964, -94.9538' in the center, and a '+' icon on the right.

Electronic PIREP Submission

Limitations...

- Requires data connection. (Business Wi-Fi in-flight, or LTE/cell data post-flight)
- PIREP Submission Queue (up to one hour), date-time is accurate at time of pilot entering
- Requires some limited head-down time. Pilots encouraged to send severe & icing PIREPs to ATC.

Submission acceptance rate over two years: 88%

If policy is changed to 5 hour acceptance: 97%

PIREP solicitation

- Asking another pilot for a PIREP in areas without recent information.
- Frequently used today in back-channels through ATC.
- Working with partners to create a electronic method to ask pilots prior to departure for a PIREP submission where needed or post-flight.
- Pilots feel more encouraged to provide data when they know it's needed.
- Forecasters needing data for special-emphasis areas.

Connectivity

*"I expect that mass adoption of airborne internet hotspots across the full range of GA and business aviation aircraft will spur a host of innovative mobile device and cloud based applications that will enhance aircraft safety and utility in ways we can't currently imagine." - Dan Schwinn
CEO Avidyne Corporation*

- ADSB-out PIREP submission, long-term
- Satellite solutions (even low bandwidth is useful)
 - Historically satellite products did not provide cost-benefit to GA pilots.
 - Iridium SBD (portable messaging products)
 - Iridium NEXT
 - Globalstar Sat-Fi part 23 STC
 - Avidyne & Globalstar Partnership
 - Some limited automated reporting may be possible in GA

Open access to data

- GA Pilots are using model soundings on a more frequent basis.
- Real-time AMDAR/TAMDAR data is not made available to GA pilots
- Open access to data will encourage private industry innovation.

Surface Reports

Surface based PIREPs can be useful but not currently suited for inclusion in NAS.

- Crowdsourcing weather data is becoming a popular trend helping forecasters. (See mPING)
- Pilots know hazards and specific threats to aviation better than the general public.
- Particularly helpful in cases of building convection and precipitation type/rate.
- Expect announcement fall 2016 for public database outside NAS to collect/distribute/request surface based reports among participating EFB vendors.

Thank you!